

chain nodes :

14 15 22 27

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 16 17 18 19 20 21

ring/chain nodes :

24

chain bonds :

10-14 11-24 14-15 15-20

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 7-10 8-9 8-12 10-13  
11-12 11-13 16-21 16-17 17-18 18-19 19-20 20-21

exact/norm bonds :

10-14

exact bonds :

5-7 6-9 8-9 11-24 14-15 15-20

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-10 8-12 10-13 11-12 11-13 16-21  
16-17 17-18 18-19 19-20 20-21

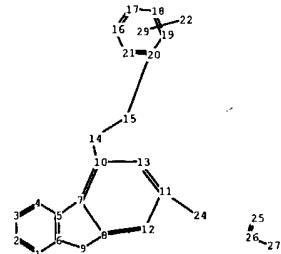
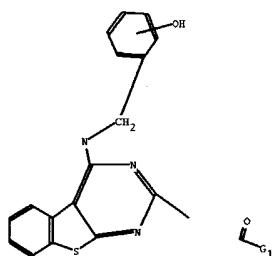
isolated ring systems :

containing 1 : 16 :

G1:O,N

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom  
10:Atom 11:Atom 12:Atom 13:Atom 14:CLASS 15:CLASS 16:Atom 17:Atom  
18:Atom



chain nodes :

14 15 22 25 26 27

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 16 17 18 19 20 21

ring/chain nodes :

24

chain bonds :

10-14 11-24 14-15 15-20 25-26 26-27

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 7-10 8-9 8-12 10-13  
11-12 11-13 16-21 16-17 17-18 18-19 19-20 20-21

exact/norm bonds :

10-14 25-26 26-27

exact bonds :

5-7 6-9 8-9 11-24 14-15 15-20

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-10 8-12 10-13 11-12 11-13 16-21  
16-17 17-18 18-19 19-20 20-21

isolated ring systems :

containing 1 : 16 :

G1:O,N

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom  
10:Atom 11:Atom 12:Atom 13:Atom 14:CLASS 15:CLASS 16:Atom 17:Atom  
18:Atom

10/018484

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 22 APR 2004 HIGHEST RN 676515-68-7  
DICTIONARY FILE UPDATES: 22 APR 2004 HIGHEST RN 676515-68-7

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>  
Uploading C:\Program Files\Stnexp\Queries\018484a.str

L1 STRUCTURE uploaded

=>  
Uploading C:\Program Files\Stnexp\Queries\018484.str

L2 STRUCTURE uploaded

=> d 11  
L1 HAS NO ANSWERS  
L1 STR

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

Structure attributes must be viewed using STN Express query preparation.

=> d 12  
L2 HAS NO ANSWERS  
L2 STR

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

Structure attributes must be viewed using STN Express query preparation.

=> s 11 sss full  
FULL SEARCH INITIATED 12:28:18 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 3 TO ITERATE

100.0% PROCESSED 3 ITERATIONS 0 ANSWERS  
SEARCH TIME: 00.00.01

L3 0 SEA SSS FUL L1

=> end~~~~~

10/018484

END`..... IS NOT A RECOGNIZED COMMAND  
The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt (=>).

=> s 12 sss full  
FULL SEARCH INITIATED 12:28:35 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 86 TO ITERATE

100.0% PROCESSED 86 ITERATIONS 6 ANSWERS  
SEARCH TIME: 00.00.01

L4 6 SEA SSS FUL L2

=> file caplus  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
ENTRY SESSION  
FULL ESTIMATED COST 310.84 311.05

FILE 'CAPLUS' ENTERED AT 12:28:44 ON 24 APR 2004  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 24 Apr 2004 VOL 140 ISS 18  
FILE LAST UPDATED: 23 Apr 2004 (20040423/ED)

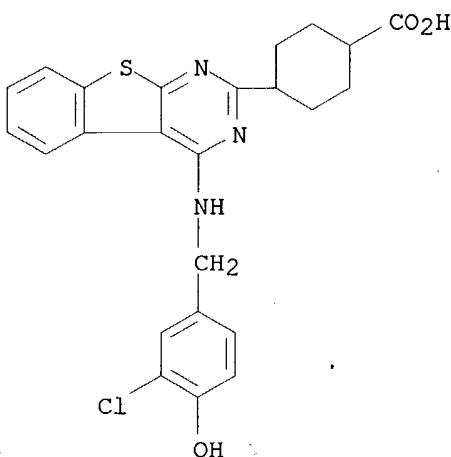
This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 14  
L5 5 L4

=> d 15 1-5 ibib abs hitstr

L5 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 2002:695578 CAPLUS  
DOCUMENT NUMBER: 137:206584  
TITLE: Oral drug delivery systems containing benzothieno-pyrimidines  
PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany  
SOURCE: Ger. Offen., 8 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10107261	A1	20020912	DE 2001-10107261	20010216
WO 2002072100	A2	20020919	WO 2002-EP609	20020123
WO 2002072100	A3	20031106		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		
EE 200300378	A	20031015	EE 2003-378	20020123
EP 1385521	A2	20040204	EP 2002-701263	20020123
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR		
BR 2002007271	A	20040323	BR 2002-7271	20020123
PRIORITY APPLN. INFO.:			DE 2001-10107261 A	20010216
			WO 2002-EP609	W 20020123
AB	The invention concerns a pharmaceutical composition with high bioavailability for the oral administration of 4-[4-(3-Chloro-4-methoxy-benzylamino)-benzo[4,5]thieno[2,3-d]pyrimidin-2-yl] cyclohexane carboxylic acid and/or 4-[4-(3-Chloro-4-hydroxy-benzylamino)-benzo[4,5]thieno[2,3-d]pyrimidin-2-yl]-cyclohexane carboxylic acid or their pharmaceutically acceptable salts that contain a surfactant with HLB value 14-16.7 and another surfactant with HLB value 3-5. Thus the content of a soft gelatin capsule was prepared from (mg): 4-[4-(3-Chloro-4-methoxy-benzylamino)-benzo[4,5]thieno[2,3-d]pyrimidin-2-yl] cyclohexane carboxylic acid ethanolamine salt 50; polyethylene-hydrated castor oil 180; medium-chain partial glycerides 135; PEG 400 90; glycerol (85%) 45.			
IT	313641-90-6, Cyclohexanecarboxylic acid, 4-[4-[(3-chloro-4-hydroxyphenyl)methyl]amino][1]benzothieno[2,3-d]pyrimidin-2-yl]-			
	RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)			
	(pharmaceutical composition containing benzothieno-pyrimidines)			
RN	313641-90-6 CAPLUS			
CN	Cyclohexanecarboxylic acid, 4-[4-[(3-chloro-4-hydroxyphenyl)methyl]amino][1]benzothieno[2,3-d]pyrimidin-2-yl]- (9CI) (CA INDEX NAME)			



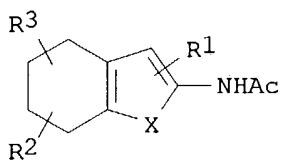
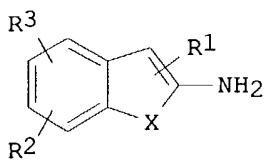
10/018484

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 2001:762987 CAPLUS  
DOCUMENT NUMBER: 135:303761  
TITLE: Preparation of benzo-annelated heterocycles by aromatization of tetrahydrobenzo-annelated heterocycles with a hydrogenation catalyst in the presence of a hydrogen acceptor  
INVENTOR(S): Wartenberg, Frank-Hardi; Koppe, Thomas; Wetzel, Walter; Wydra, Markus; Benz, Achim  
PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany  
SOURCE: PCT Int. Appl., 26 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001077099	A1	20011018	WO 2001-EP2672	20010309
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 10017947	A1	20011025	DE 2000-10017947	20000411
EP 1280792	A1	20030205	EP 2001-921324	20010309
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001009937	A	20030527	BR 2001-9937	20010309
JP 2003530392	T2	20031014	JP 2001-575572	20010309
US 2003078422	A1	20030424	US 2002-257139	20021009
US 6723848	B2	20040420		
NO 2002004887	A	20021010	NO 2002-4887	20021010
PRIORITY APPLN. INFO.:			DE 2000-10017947 A	20000411
			WO 2001-EP2672 W	20010309

OTHER SOURCE(S): CASREACT 135:303761; MARPAT 135:303761  
GI



AB Title compds. [I; X = S, O, NH; R1 = cyano, NO<sub>2</sub>, acyl, CO<sub>2</sub>H, CO<sub>2</sub>A, CO<sub>2</sub>NR<sub>4</sub>R<sub>5</sub>, (substituted) PhCO, CO<sub>2</sub>Ph; R<sub>2</sub>, R<sub>3</sub> = H, alkyl, NO<sub>2</sub>, cyano, OH, alkyloxy, acyl; R<sub>4</sub>, R<sub>5</sub> = H, alkyl, acyl, (substituted) Ph; R<sub>4</sub>R<sub>5</sub> = CH<sub>2</sub>(CH<sub>2</sub>)<sub>n</sub>CH<sub>2</sub>; A = alkyl; n = 2-4] are prepared by reaction of II (R<sub>1</sub>-R<sub>3</sub> as

above, Ac = acyl) with a noble metal catalyst in the presence of a H acceptor followed by deacylation of the acylated amino group with an amine. Thus, 2-acetylaminio-4,5,6,7-tetrahydrobenzothiophene-3-carboxylic acid Et ester in mesitylene was heated at 170° with Pd/C under stirring followed by addition of Et cinnamate over 30 min. stirring for 21 h, and addition at 100° of pyrrolidine to give after 25 h stirring 64% 2-aminobenzo[b]thiophene-3-carboxylic acid Et ester. The latter is an intermediate for 4-[4-(3-chloro-4-methoxybenzylamino)benzo[4,5]thieno[2,3-d]pyrimidin-2-yl]cyclohexanecarboxylic acid and 4-[4-(3-chloro-4-hydroxybenzylamino)benzo[4,5]thieno[2,3-d]pyrimidin-2-yl]cyclohexanecarboxylic acid.

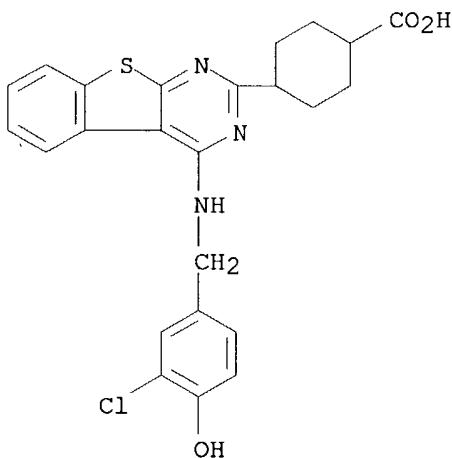
IT **313641-90-6P**

RL: IMF (Industrial manufacture); PNU (Preparation, unclassified); PREP (Preparation)

(preparation of benzo-annelated heterocycles by aromatization of tetrahydrobenzo-annelated heterocycles with hydrogenation catalyst in the presence of hydrogen acceptor)

RN 313641-90-6 CAPLUS

CN Cyclohexanecarboxylic acid, 4-[4-[(3-chloro-4-hydroxyphenyl)methyl]amino][1]benzothieno[2,3-d]pyrimidin-2-yl]- (9CI)  
(CA INDEX NAME)

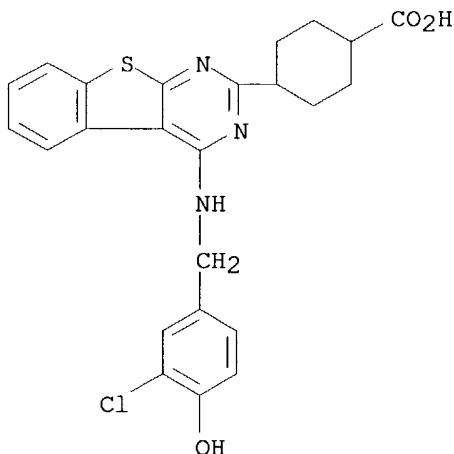
IT **313641-90-6DP, alkyl esters**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of benzo-annelated heterocycles by aromatization of tetrahydrobenzo-annelated heterocycles with hydrogenation catalyst in the presence of hydrogen acceptor)

RN 313641-90-6 CAPLUS

CN Cyclohexanecarboxylic acid, 4-[4-[(3-chloro-4-hydroxyphenyl)methyl]amino][1]benzothieno[2,3-d]pyrimidin-2-yl]- (9CI)  
(CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2001:525954 CAPLUS  
 DOCUMENT NUMBER: 135:112007  
 TITLE: Pharmaceuticals containing 2-pyrrolidone as the dissolving solvent  
 INVENTOR(S): Schreder, Sven; Schamp, Karen; Wildner, Claudia  
 PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany  
 SOURCE: PCT Int. Appl., 34 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001051089	A1	20010719	WO 2001-EP81	20010105
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1255565	A1	20021113	EP 2001-942307	20010105
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003153585	A1	20030814	US 2002-169396	20021101
PRIORITY APPLN. INFO.:			DE 2000-10001020 A	20000113
			WO 2001-EP81	W 20010105

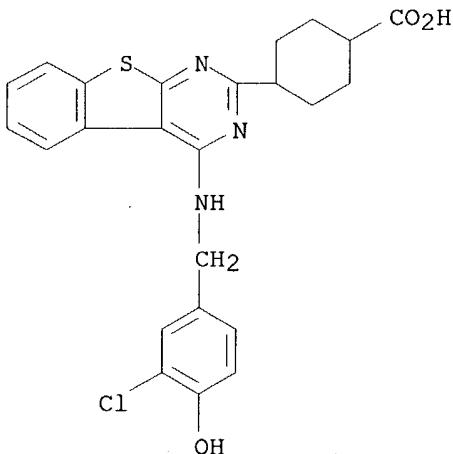
AB The invention relates to pharmaceuticals containing at least 1 drug and 2-pyrrolidone as the dissolving solvent. Thus, a formulation was prepared from the ethanolamine salt of 4-[4-(3-chloro-4-methoxybenzylamino)benzo[4,5]thieno[2,3-d]pyrimidin-2-yl]cyclohexylcarboxylic acid ethanolamine salt 50, 2-pyrrolidone 100, and Gelucire 44/14 780 mg.

IT 313641-90-6

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (pharmaceuticals containing pyrrolidone as dissolving solvent)

RN 313641-90-6 CAPLUS

CN Cyclohexanecarboxylic acid, 4-[4-[(3-chloro-4-hydroxyphenyl)methyl]amino][1]benzothieno[2,3-d]pyrimidin-2-yl]- (9CI)  
 (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2001:523501 CAPLUS  
 DOCUMENT NUMBER: 135:111982  
 TITLE: Pharmaceutical formulation containing (benzothienopyrimidinyl)cyclohexancarboxylate derivative  
 INVENTOR(S): Schreder, Sven; Wildner, Claudia; Schamp, Karen  
 PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany  
 SOURCE: Ger. Offen., 8 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10001021	A1	20010719	DE 2000-10001021	20000113
WO 2001051052	A1	20010719	WO 2001-EP82	20010105
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.: DE 2000-10001021 A 20000113

AB The invention concerns a pharmaceutical formulation containing 4-[4-(3-chloro-4-methoxybenzylamino)benzo[4,5]thieno[2,3-d]pyrimidin-2-

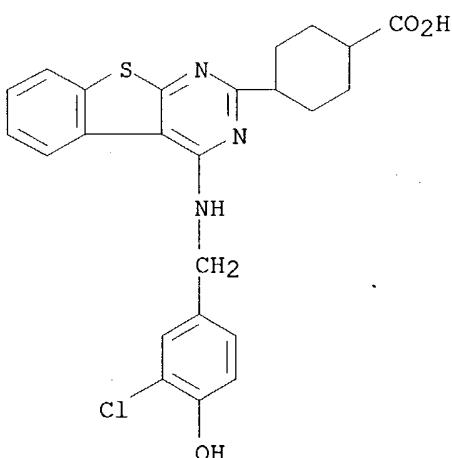
yl]cyclohexancarboxylic acid (I) or its salts and/or 4-[4-(3-chloro-4-hydroxybenzylamino)benzo[4,5]thieno[2,3-d]pyrimidin-2-yl]cyclohexancarboxylic acid or its salts, a substrate, a disintegrant and if necessary a glidant. Thus, a capsule formulation contained the ethanolamine salt of I 56.4, EtOH 900.0, microcryst. cellulose 143.3, highly-dispersed SiO<sub>2</sub> 7.2, and sodium carboxymethyl starch 5.0 mg.

IT 313641-90-6

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(pharmaceutical formulations containing (benzothienopyrimidinyl)cyclohexancarboxylate)

RN 313641-90-6 CAPLUS

CN Cyclohexanecarboxylic acid, 4-[4-[(3-chloro-4-hydroxyphenyl)methyl]amino][1]benzothieno[2,3-d]pyrimidin-2-yl]- (9CI)  
(CA INDEX NAME)



L5 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:897971 CAPLUS

DOCUMENT NUMBER: 134:56682

TITLE: Preparation of benzothienopyrimidinealkanoates and  
analogs as cGMP phosphodiesterase inhibitorsINVENTOR(S): Jonas, Rochus; Schelling, Pierre; Kluxen,  
Franz-Werner; Christadler, Maria

PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany

SOURCE: Ger. Offen., 10 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19928146	A1	20001221	DE 1999-19928146	19990619
WO 2000078767	A1	20001228	WO 2000-EP5278	20000607
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,  
CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
EP 1189907 A1 20020327 EP 2000-936871 20000607  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO  
BR 2000011778 A 20020423 BR 2000-11778 20000607  
JP 2003502429 T2 20030121 JP 2001-504933 20000607  
AU 767273 B2 20031106 AU 2000-52204 20000607  
NO 2001006201 A 20011218 NO 2001-6201 20011218  
ZA 2002000440 A 20030417 ZA 2002-440 20020117  
PRIORITY APPLN. INFO.: DE 1999-19928146 A 19990619  
WO 2000-EP5278 W 20000607

OTHER SOURCE(S): MARPAT 134:56682

AB R1CH2NHZR [Z = benzo[4,5]thieno[2,3-d]pyrimidine-4,2-diyl] [I; R = Z1R7; R1 = (un)substituted Ph; R7 = CO2H, alkoxy carbonyl, cyano, (di)(alkyl)carbamoyl; Z1 = alk(en)ylene, cycloalkylene, phenylene, etc.] were prepared as cGMP phosphodiesterase inhibitors (no data). Thus, e.g., I (R = CH2CH2CO2H, R1 = C6H3(OMe)Cl-4,3) was prepared

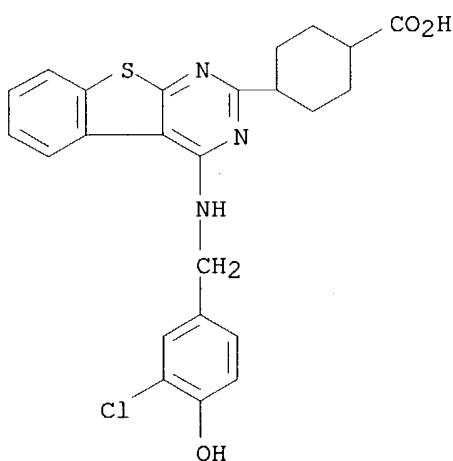
IT 313641-90-6P 313641-91-7P 313641-92-8P

313641-93-9P 313641-94-0P 313641-95-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of benzothienopyrimidinealkanoates and analogs as cGMP phosphodiesterase inhibitors)

RN 313641-90-6 CAPLUS

CN Cyclohexanecarboxylic acid, 4-[4-[(3-chloro-4-hydroxyphenyl)methyl]amino][1]benzothieno[2,3-d]pyrimidin-2-yl]- (9CI)  
(CA INDEX NAME)



RN 313641-91-7 CAPLUS

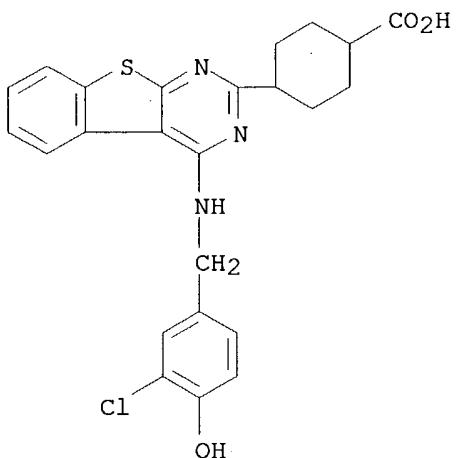
CN Cyclohexanecarboxylic acid, 4-[4-[(3-chloro-4-hydroxyphenyl)methyl]amino][1]benzothieno[2,3-d]pyrimidin-2-yl]-, compd. with 2-aminoethanol (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 313641-90-6

CMF C24 H22 Cl N3 O3 S

10/018484

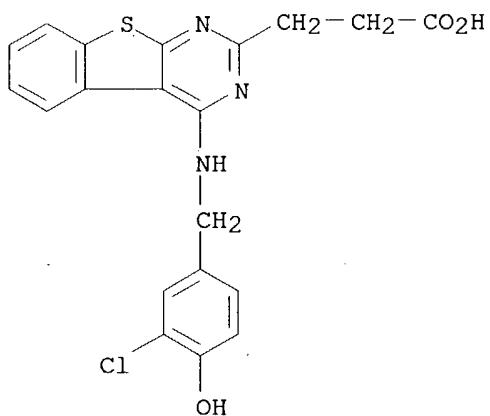


CM 2

CRN 141-43-5  
CMF C2 H7 N O

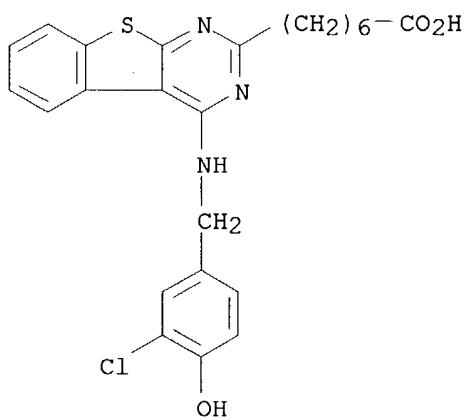
H<sub>2</sub>N—CH<sub>2</sub>—CH<sub>2</sub>—OH

RN 313641-92-8 CAPLUS  
CN [1]Benzothieno[2,3-d]pyrimidine-2-propanoic acid, 4-[(3-chloro-4-hydroxyphenyl)methyl]amino]- (9CI) (CA INDEX NAME)



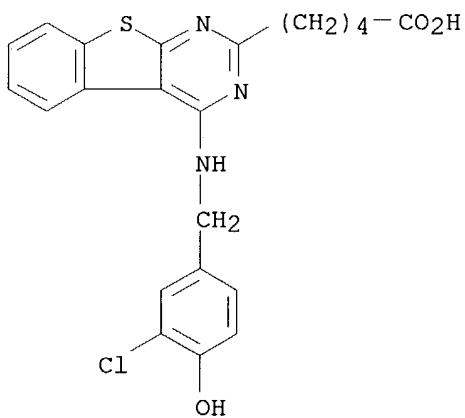
RN 313641-93-9 CAPLUS  
CN [1]Benzothieno[2,3-d]pyrimidine-2-heptanoic acid, 4-[(3-chloro-4-hydroxyphenyl)methyl]amino]- (9CI) (CA INDEX NAME)

10/018484



RN 313641-94-0 CAPLUS

CN [1]Benzothieno[2,3-d]pyrimidine-2-pentanoic acid, 4-[[[3-chloro-4-hydroxyphenyl)methyl]amino]- (9CI) (CA INDEX NAME)



RN 313641-95-1 CAPLUS

CN Cyclohexaneacetic acid, 4-[4-[[3-chloro-4-hydroxyphenyl)methyl]amino][1]benzothieno[2,3-d]pyrimidin-2-yl]- (9CI) (CA INDEX NAME)

